

AF

# (12) UK Patent Application (19) GB (11) 2 202 445 (13) A

(43) Application published 28 Sep 1988

(21) Application No 8704461

(22) Date of filing 25 Feb 1987

(71) Applicant  
Robert Alan Melville  
The Chestnuts, Little Humby, Grantham,  
Lincolnshire, NG33 4HW

(72) Inventor  
Robert Alan Melville

(74) Agent and/or Address for Service  
Robert Alan Melville  
The Chestnuts, Little Humby, Grantham,  
Lincolnshire, NG33 4HW

(51) INT CL<sup>4</sup>  
A61M 5/00

(52) Domestic classification (Edition J):  
A5R CX

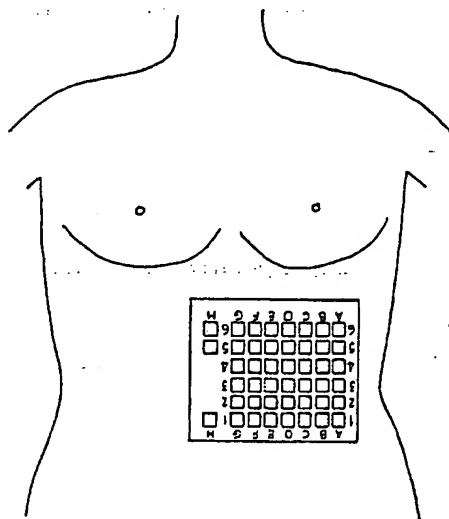
(56) Documents cited  
GB A 2043454 WO A 8000060 DE A 2444379  
Note: GB A 2043454 and WO A 80/00060 are  
equivalent;

(58) Field of search  
A5R  
Selected US specifications from IPC sub-class  
A61M

## (54) Injection guide grid

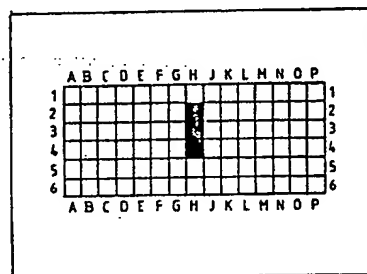
(57) A double sided flexible injection guide grid having a number of apertures each clearly identified or defined which aids a person requiring frequent subcutaneous injections to vary the site of the injection and thus avoid complications which sometimes occur when frequent injections are given into the same small area of skin.

A record card Fig. 4 is provided so that each site may be recorded at approximately the time of the injection.



DRAWING 3

DRAWING 4



GB 2 202 445 A

Fig. 010001

2202445

DRAWING 1

A	B	C	D	E	F	G	H
1							
2							
3							
4							
5							
6							
A	B	C	D	E	F	G	H

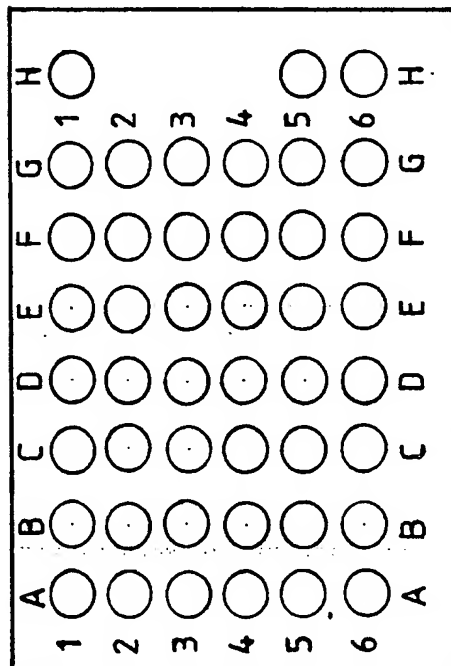
SIDE 1

H	J	K	L	M	N	O	P
1							
2							
3							
4							
5							
6							
H	J	K	L	M	N	O	P

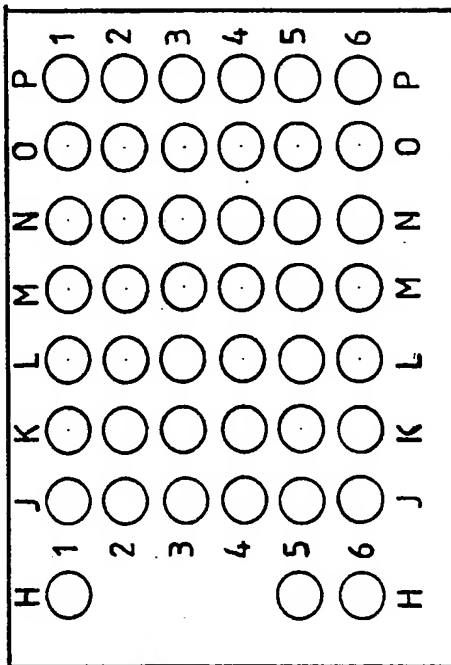
SIDE 2

2202445

DRAWING 2



SIDE 1



SIDE 2

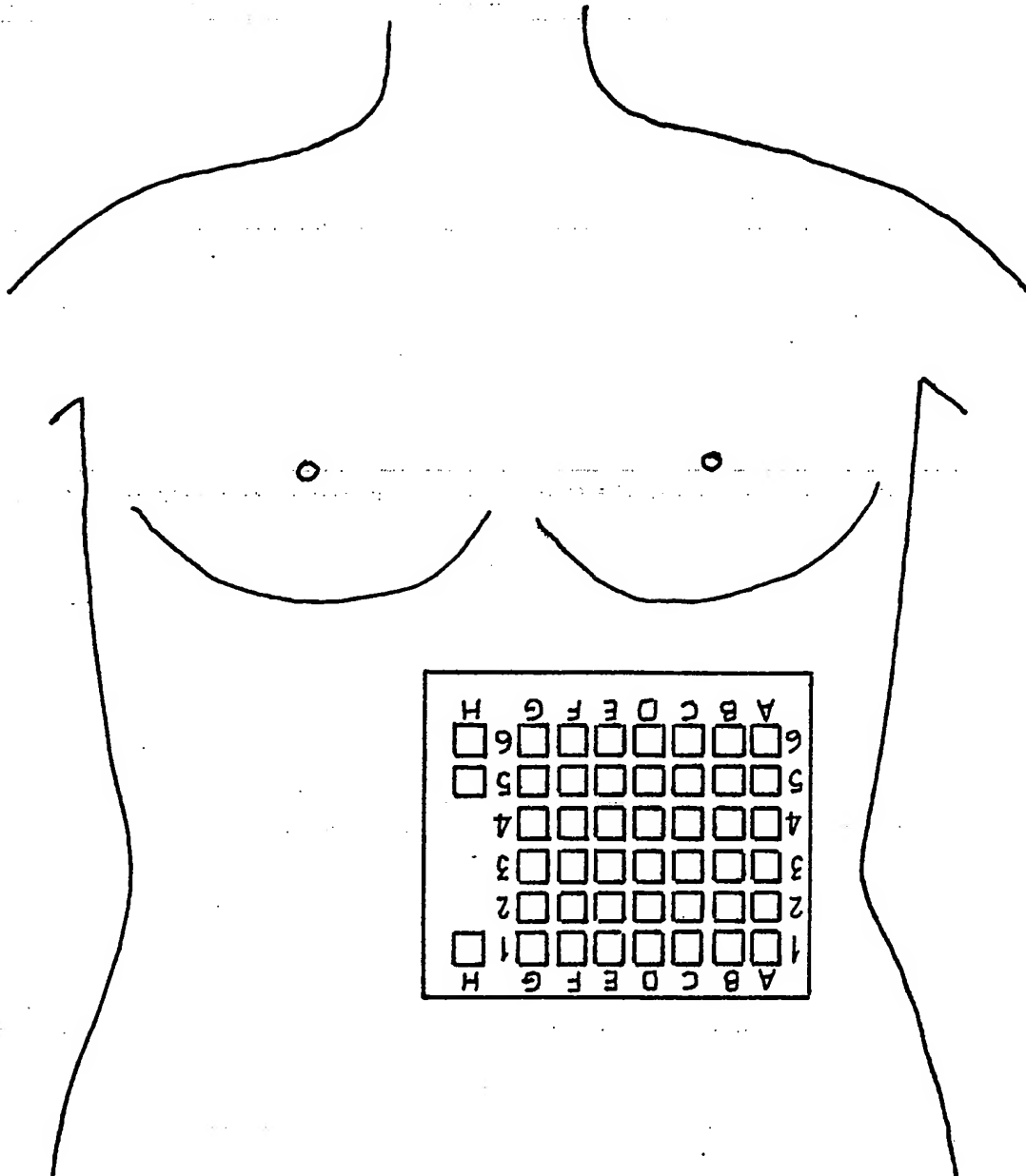
FIG. Original

25 FEB. 87- 04461

DFA

3/4

2202445



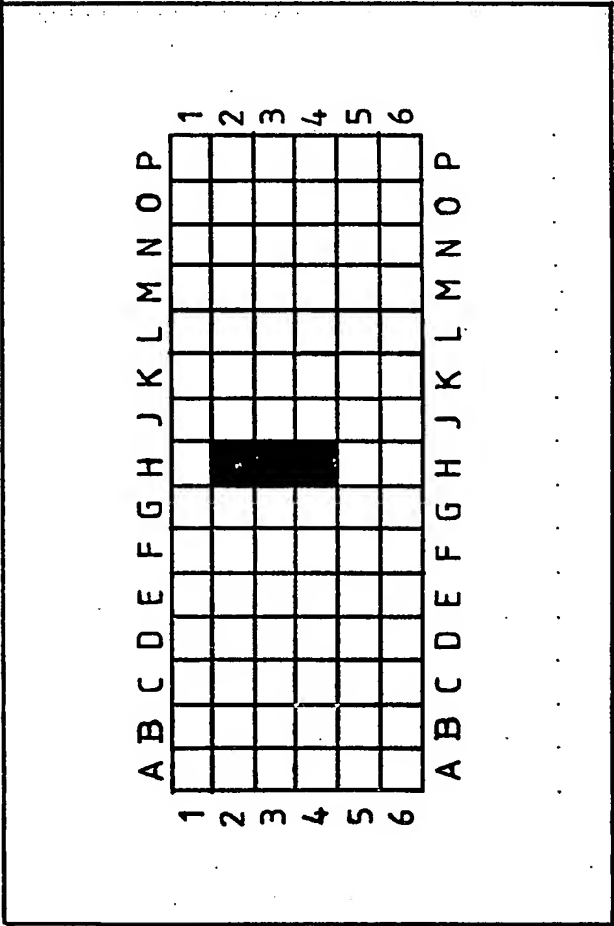
DRAWING 3

25 FEB 87- 04461

D F A

2202445

DRAWING 4



INJECTION GUIDE GRID - ABDOMEN

2202445

This invention relates to a guide grid for abdominal injections.

In illnesses or medical conditions which require daily or more frequent subcutaneous injections, there is a risk of soreness, atrophy of the subcutaneous fat cells and the formation of fatty tumours, due to continual injection in the same small area. One example of such an illness or medical condition is insulin dependent diabetes mellitus.

According to the present invention there is provided a flexible grid and a record card. The flexible grid provides a guide to injection sites and the record card enables these sites to be recorded immediately after, or prior to their use. The number of sites will vary according to the size of the abdomen. The smallest grid currently envisaged (for juvenile use) provides 62 sites, the medium size 86 sites and the large size 116 sites, hence any particular site is used only once per 62, 86 or 116 injections. The number of sites quoted is not the basis of the invention, by changing the dimensions of the apertures and/or the web width between apertures the number of sites can be increased/decreased for any particular Injection Guide Grid size.

An injection guide grid large enough to cover the entire abdominal area suitable for injection would be too large to be carried (when the grid user was travelling for example on holiday) without risk of damage to the grid. The present invention relates to a grid which is double sided, each side corresponding to one half of the injectable abdominal area.

A specific embodiment of the invention will now be described by way of example with reference to the accompanying drawings in which

Drawing 1 shows an Injection Guide Grid

Drawing 2 shows the same size grid as drawing 1 but has an example of an alternative aperture shape.

Drawing 3 shows a grid in position on an abdomen.

Drawing 4 shows an injection record card.

Referring to drawing 1 the injection guide grid is made from a flexible material, for example card or 'plastic'. The grid is made up of a number of apertures separated from each other by a web of the material being used, together with an unbroken area of the material at one side, the completed grid is bounded by a border of unbroken material. In use the unbroken area which in drawing 1 would have contained apertures H2, H3 and H4 is placed over the umbilicus as the umbilicus is not used as an injection site. This unbroken area not only protects the umbilicus but also serves as a location reference area so that the grid can be placed on the abdomen in approximately the same position each time that it is used.

Drawing 2 shows a grid of identical size to that shown in drawing 1. The apertures shown in drawing 1 are rectangular in shape whilst those shown in drawing 2 are circular in shape. The shape of the apertures does not affect the function of the grid and any shape can be used. Each aperture is clearly identified by a number and an alphabetical letter. Both sides of the grid are used, in drawings 1 and 2 side 1 corresponds to the left hand area of the abdomen and side 2 to the right hand area.

Drawing 3 shows a grid in position on an abdomen with the letters and numbers inverted. The grid is used in this manner so that the grid user, looking down on the grid from above, will see the letters and numbers the correct way up.

Drawing 4 shows a record card which corresponds to the grid shown in drawings 1 and 2. The record card is single sided and allows a record to be kept of all injection sites used.

To use the grid an injection is drawn into a syringe in the normal manner. The grid is then placed on the abdomen with the unbroken area covering the umbilicus, the grid being held in position by one of the grid users hands. Reference is then made to the record card by the user in order to determine which injection site is to be used. The syringe needle is pushed into the abdomen through the appropriate aperture, the syringe being held by the free hand. When the needle is in the abdomen the grid can be released and allowed to rest upon the syringe/base of the needle, the grid is light in weight and will not affect the action of the syringe. The hand thus freed from holding the grid can then be used to assist in making the injection in the approved

manner. When the injection has been made the needle is withdrawn from the abdomen - the syringe being held by one hand, the grid being held by the other hand. The site used is then marked upon the record card. The suggested sequence of events outlined in this paragraph are a suggestion only and can be modified to suit the grid user.

A suggested sequence of injections would begin with side 1 of the grid shown in drawings 1 and 2, uppermost. The first injection would be made through aperture A1 (or 1A), the second through A2, the third through A3 and so on until A6 was reached and used. A6 would be followed by B1, B2, B3, B4, B5, B6, C1, C2 and continue in sequence to complete side 1 with H1, H5 and H6. The next injection site would be found by turning the grid over and placing side 2 uppermost, the record card would show that sites H1, H5 and H6 had previously been used and the sequence would continue with J1, J2, J3 and so on until the final site in the sequence (P6) was reached. If no other parts of the body were being used to provide injection sites the grid would be turned over so that side 1 was uppermost and the sequence described in this paragraph would be repeated using a clean record card.



CLAIMS

- 1 An injection guide grid providing a guide to a number of injection sites for abdominal injections.
- 2 An injection guide grid as claimed in Claim 1 made from flexible material so that it will temporarily deform to follow the contour of the specific abdomen to be injected.
- 3 An injection guide grid as claimed in Claim 1 or Claim 2 which is double sided to reduce overall size, one side being appropriate to the left hand side of the abdomen, the other side being appropriate to the right hand side of the abdomen.
- 4 An injection guide grid as claimed in any of the preceeding claims which has apertures clearly identified and which is provided with an injection record card so that each site used can be recorded.
- 5 An injection guide grid sustantially as described herein with reference to drawings 1, 2, 3 and 4.

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☒ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☒ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**